

CLAIMS

What is claimed is:

- 5 1. A secondary packing gland apparatus, attachable to a valve having an axial stem and a primary packing gland with packing therein, said secondary packing gland apparatus comprising:
- a primary packing gland flange disposable around a stem in said valve, said primary packing gland flange defining therein a second packing chamber;
- 10 secondary packing disposed within said second packing chamber;
- a secondary packing gland flange disposed around said stem, insertable into said second packing chamber, and movable axially in relation to said stem; and
- adjustable means for connecting said secondary packing gland flange to said primary packing gland flange;
- 15 wherein said secondary packing is compressible by said secondary packing gland flange, and said means for connecting is adjustable to move said secondary packing gland flange axially to increase and decrease the compression of said secondary packing.
2. An apparatus according to claim 1 wherein said primary packing gland flange
- 20 defines therein an interior annulus for intercepting leakage from the primary packing gland.
3. An apparatus according to claim 2 further comprising a vent from said annulus to the exterior of said primary packing gland flange.

4. An apparatus according to claim 1 wherein said secondary packing gland flange comprises a cylindrical pusher extending toward and contactable with said secondary packing.

5. An apparatus according to claim 1 wherein said adjustable connection means
5 comprises:

at least one secondary packing bolt secured to said primary packing gland flange;

at least one secondary packing gland nut threadably engageable with said at least
one secondary packing bolt; and

at least one elastically reboundable spring means disposed upon said at least one
10 secondary packing bolt between said at least one secondary packing gland nut and said primary
packing gland flange.

6. An apparatus according to claim 5 wherein said spring means comprises at least
one Belleville washer.

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7. On a valve assembly for regulating the flow of a fluid, the valve assembly including a valve body defining a primary packing gland with packing material packed therein around a valve stem disposed through said primary packing gland, the improvement comprising a secondary packing gland assembly comprising:

5 a primary packing gland flange attachable to said valve body, said primary packing gland flange defining therein a second packing chamber;

secondary packing disposed within said second packing chamber;

a secondary packing gland flange disposed around said stem, insertable into said second packing chamber, and movable axially in relation to said stem; and

10 first adjustable means for connecting said secondary packing gland flange to said primary packing gland flange;

wherein said secondary packing is compressible by said secondary packing gland flange, and said means for connecting is adjustable to move said secondary packing gland flange axially to increase and decrease the compression of said secondary packing.

15 8. An apparatus according to claim 7, further comprising a second adjustable means for connecting said primary packing gland flange to said valve body.

9. An apparatus according to claim 8 wherein said second adjustable connecting means comprises:

at least one primary packing bolt secured to said valve body;

at least one primary packing gland nut threadably engageable with said at least one primary packing bolt; and

at least one elastically reboundable spring means disposed upon said at least one primary packing bolt between said at least one primary packing gland nut and said valve body; wherein said second means for connecting is adjustable to move said primary packing gland flange axially to increase and decrease the compression of said primary packing.

10. An apparatus according to claim 9 wherein said first adjustable connecting means and said second adjustable connecting means are angularly offset from each other in relation to said stem.

11. An apparatus according to claim 7 wherein said primary packing gland flange defines therein an interior annulus for intercepting leakage from the primary packing gland.

12. An apparatus according to claim 11 further comprising a vent from said annulus to the exterior of said primary packing gland flange.

13. An apparatus according to claim 7 wherein said secondary packing gland flange comprises a cylindrical pusher extending toward and contactable with said secondary packing.

14. An apparatus according to claim 7 wherein said adjustable connecting means comprises:

at least one secondary packing bolt secured to said primary packing gland flange;

at least one secondary packing gland nut threadably engageable with said at least

5 one secondary packing bolt; and

at least one elastically reboundable spring means disposed upon said at least one secondary packing bolt between said at least one secondary packing gland nut and said primary packing gland flange.

10 15. An apparatus according to claim 9 wherein said first adjustable connection means and said second adjustable connecting means are adjustable independently of each other.